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EMPEDOCLES' PSYCHOLOGICAL DOCTRINE

In Its Original and in Its Traditional Setting

BY

WALTER VEAZIE, A.B.

SOMETIME CUTTING TRAVELLING FELLOW
OF COLUMBIA UNIVERSITY

REPRINTED FROM
ARCHIVES OF PHILOSOPHY
No. 14

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY, IN THE FACULTY OF PHILOSOPHY, COLUMBIA UNIVERSITY

NEW YORK CITY
1922

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PREFATORY NOTE

Early Greek philosophy is studied altogether too much in a reverse direction; a beginning is made with late historical accounts and then in their secondary light the earlier sources are interpreted.

The method of this investigation is to begin with the fragments of Empedocles. Their terminology is collected, its interrelationships are examined, and analogies are traced in contemporary writings. The attempt is then made to determine just what Plato was attacking in certain of the Socratic arguments, and to find why he was not sympathetic to those viewpoints. We will thus be in a position to show the irrelevancies of the setting in which Aristotle and his successors tried to record or ridicule the early naturalistic philosophy.

The purpose is as much negative as positive, *i.e.* to determine what part of the tradition belongs to the recorders rather than to the early Greeks.

The writer is indebted to Professor Frederick J. E. Woodbridge for the general conceptions of Greek philosophy, for much of the method, and above all for the inspiration which he has derived from Professor Woodbridge's lectures and seminar at Columbia. His gratitude is also due to Professor John J. Coss for many helpful suggestions and for the great interest he has shown in the writer's work for a number of years.

It is also the author's wish to express at this time his thanks to the founder of the William Bayard Cutting Travelling Fellowships and to the Trustees of Columbia University for the opportunity afforded him of studying in England.

WALTER VEAZIE

COLUMBIA UNIVERSITY,
May, 1917.

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CHAPTER I

INTRODUCTION

"Some physicians and sophists," writes Hippocrates,[1] "say that no one can know medicine who is ignorant as to what man is, how he first came to be, and whence he was originally compounded and that whoever would cure men properly must learn this. But this doctrine belongs rather to philosophy, as *e.g.*, Empedocles and others who have written Περὶ φύσιος."

To understand Empedocles' conception of psychical processes one must get at his conception of a living being and this in turn is founded on his cosmic philosophy.

In another place[2] I have discussed the general question of the underlying conception of early Greek philosophy and the present work is in a sense a special application of this study. We determined there that in the search for φύσις the early naturalistic philosophers were not primarily interested in "matter," but for that in the universe which, in Aristotle's language, "in its primary and strict sense is the essence (οὐσία) of those things which have in themselves *per se* a source of motion" (*Metaph.* Δ, iv), what it is that makes things "get a move on."

This procedure had at first taken the form of explaining cosmic origins from the standpoint of generation,[3] but absolute beginnings were totally inconceivable to the philosophies of Empedocles' time, so that Empedocles faced the problem of accounting for plurality and transformation or motion in an eternal universe.

The orthodox modern account of Empedocles' philosophy, which we inherit from Zeller, attributes to him a conception of "matter and energy" somewhat resembling that of our nineteenth century physics, upon which is vaguely reared a crude materialistic doctrine of sensation. Perhaps the most precise statement of this interpretation is that given by Windelband.[4] With respect to Empedocles' general position Windelband writes, "He was the first in whose theory *force* and *matter* are differentiated as separate cosmic powers. Under the influence of

[1] *On ancient med.*, 20: ed. Kvehlewein.

[2] "The Meaning of φύσις in Early Greek Philosophy," *Studies in the History of Ideas*, edited by the department of philosophy of Columbia University, Vol. I, 1918, p. 27.

[3] *Cf.* F. J. E. Woodbridge, "The Dominant Conception of Early Greek Philosophy," *Philosophical Review*, Vol. X, 1901.

[4] *History of Ancient Philosophy*, 1899, pp. 74, 78.

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Parmenides he had accordingly so conceived the world-stuff that the ground of motion could not be found in it itself."

With regard to psychical processes Windelband considers that: "It is of especial interest that he conceived the process of perception and sensation as analogous to his universal theory of the interaction of elements. He explained this process as contact of the small parts of the perceived things with the similar parts of the perceiving organs, wherein the former were supposed to press upon the latter, as in hearing; or the latter upon the former, as in sight. . . . Hence it follows for Empedocles that all perceptual knowledge depends upon the combination of elements in the body and especially in the blood, and that the spiritual nature depends on the physical nature."

In contradistinction to this current interpretation we maintain that Empedocles was dealing, both cosmologically and anthropologically, with a problem of φύσις and that he was looking for *those features of things which would account for their present development;* for that aspect of the world at large which has in itself the power of motion, or development, and for the natural source of life and thought in man.

For Empedocles all things in the universe are a combination of the six elements—air, earth, fire, water, love, and hate. Just what is the relation of the last two to the others is not altogether clear. According to Tannery,[5] "ne sont nullement des forces abstraites; ce sont simplement des *milieux* doués de propriétés spéciales et pouvant se déplacer l'un l'autre, milieux au sein desquels sont plongées les molécules corporelles, mais qui d'ailleurs sont conçus comme tout aussi matériels que l'éther impondérable des physiciens moderns, avec lequel ils présentent la plus grande analogie."

Empedocles apparently recognized as the great motive force the attraction of like for like. "L'attraction des semblables n'est pas, chez l'Agrigentin, une force abstraite transcendantalement; c'est une propriété immanente à la matière" (*l.c.*, p. 309).

From a universe of elements having this source of motion in itself, the world and its inhabitants "live and move and have their being." A man or an animal is a *definite, organic complex.* A man has in himself this source of motion and in his surroundings the conditions thereof. Psychical processes are activities occasioned by the meeting of the organism with its cognate environment. It is an activity latent in the elements and complex structure of the man, determined by the nature of his sense organs and "central nervous system," causing him to react to certain conditions. The organic structure of the man is the determining factor along with the immanent tendency to motion.

The individual organs of perception were involved in the discussion

[5] *La Science Helléne,* 1887, p. 306.

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and what chiefly troubled the ancient commentators was the so-called relation or perception of like by like in these special cases. It was not recognized that they are here discussing *organs* and that the attraction of like to like, in so far as it may have figured, was the starting to activity, the bringing into relation of the organism to the object through physical contact set up by way of the organ. The famous fragment (84) of Empedocles on the structure of the eye is obviously a discussion of the problem of obtaining a connection between the object and the eye.

Subsequent Greek philosophers and historians of philosophy, in giving their account of this naturalistic psychology, rewrote it into the language and doctrines of their own or contemporary systems and made nonsense of most of it. Plato alone took the position seriously and with some appreciation, and it is from his controversy that most is to be learned.

Some light is thrown on the subject by examination of the genuine works of Hippocrates who was bred in the tradition and was in a high degree capable of appreciating it. It is also in this connection interesting to note that, although all traces of the meaning of the early view have died out in philosophical literature by the time of Theophrastus, they apparently survived to an extent in Galen, the physician (second century, A.D.).[6]

[6] *Cf.* Chauvet, *La philosophie des médecins grecs*, p. 367 *sq.* (*N. B.* p. 371).

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CHAPTER II

THE FRAGMENTS

For Empedocles *νόημα* is in, or is the blood about the heart (*Fr.* 105) and is shared by all things along with *φρόνησις* (*Fr.* 110). Τὸ *φρονεῖν* is by the will or pleasure of chance (*Fr.* 103) and along with the feeling of pleasure and pain is from the elements, including love and strife (*Fr.* 107.) Τὸ *φρονεῖν* different things lies in growing to be different (*Fr.* 108), while *τὸ φρονεῖν φίλα* and "accomplish friendly(?) works" is by *φιλότη* (*Fr.* 17).

Φρόνησις and *νόημα*, I submit, are used more or less synonymously and the meaning of these words is something far more elemental and general than our word "thought." Such is the meaning and use of *φρόνησις* in the Hippocratic treatise *On the sacred disease*[7] which is summed up by Foesius[8] thus: "*φρόνησις* signifies wisdom, but is used for sense [*sensus*] or senstivity [*sentiendi vis*] in the book *On the sacred disease* (p. 125, 10 [ed. Bebelii, Basil, 1538]). Καὶ οὕτω *τὴν φρόνησιν καὶ τὴν κίνησιν τοῖσι μέλεσι παρέχει*, 'and thus it imparts sense and motion to the members.' It arises from the air and breath which, coming into the lungs, is dispersed through the veins and gives sense and motion to the members. On the other hand, when it is excluded from the veins and lungs by phlegm, the man is deprived of speech and is benumbed, *i.e.*, is without sense and motion."

Empedocles was not quite so advanced in his physiology, but the placing of sensibility in the flowing blood, traveling to all parts of the body, is a very similar theory—and one, by the way, with a large family tree.

In Hippocrates *φρόνησις* is supplied to the brain by air and from it along with motion to the body through the arteries and veins. That is, the anatomical apparatus involved is the same, although the mediating stuff is in the one case air, in the other blood and the seat for one the brain, for the other the heart. In Empedocles all things have a share of *φρόνησις* and it is *by* all that we partake thereof (*Fr.* 107). It is connected with the feeling of pleasure and pain and by *φιλότη* we *φρονοῦμεν φίλα* (*Fr.* 17), "have yearning feelings" and "accomplish the coördinate deeds." So in Hippocrates, motion is a concomitant of *φρόνησις* and it is from the brain that (p. 609, 1, 11 sq.) "we have

[7] Kühn, Vol. I (i.e. XXI of series), pp. 596, 600, 601, 609, *sq.*
[8] *Oeconomia Hipp. alpha. serie*, A. Foesio, Basil, 1518; Art. *φρόνησις*.

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pleasures, glad thoughts, wailings, feeling (φρονεῖν), perception (νοεῖν), sight, hearing, the knowing (γινώσκειν) of the ugly and the beautiful, the bad and the good, discriminating some by custom, others perceiving (αἰσθάνεσθαι), by their usefulness."

For Empedocles the senses are "instruments" or "powers" (παλάμαι) spread over the body (*Fr.* 2), "openings" (πόροι) into τὸ νόησαι (*Fr.* 4), "highroads" (ἁμαξιτός) into the φρήν. Hippocrates says (*l.c.*, p. 612), "the air supplies φρόνησις to the brain, while the eyes, ears, tongue, hands, and feet work hard to supply those things which the brain utilizes (γινώσκῃ)."

Hippocrates gives us in this treatise, *On the sacred disease,* an elaborate description of the changes in the brain such as overheating or cooling, superabundance of moisture, *etc.* He is here chiefly concerned with mania, but in the work *Concerning airs, waters and places* he makes the more general statement: "With respect to the lack of spirit and cowardliness of the men, the main causes of the Asiatics being less warlike and of a milder character than the Europeans are the seasons whose temperature variations are slight and constant. Thus there are no irritants for the mind (γνώμη) nor any marked changes of the body from which the disposition would be rendered wild (Kühn, Vol. I, p. 553)." In fragment 108 Empedocles says that "in so far as men grow to be different, so far it is in their power to φρονεῖν other things."

Hippocrates passes here from the field of simple sensation or sensibility and so also this last statement of Empedocles introduces us to a broader field.

First, "one is convinced only of that which he chances upon" (*Fr.* 2); "wisdom grows in men by experience," (literally, "according to what is before them" (*Fr.* 106); and "everything πεφρόνηκεν by the will of chance" (*Fr.* 103).

Secondly, "wisdom," or teaching, is said to "grow into the ἦθος, where is each man's φύσις" (*Fr.* 110). Now each of the elements, including love and strife, is said (*Fr.* 17[29]) "to have its own value (τιμή) and ἦθος and to gain the upper hand in its turn as time revolves." Φύσις, as we quoted before, "in its primary and strict sense is the essence of those things which have in themselves *per se* a source of motion." Empedocles in fragment 8 contends that there is no φύσις of mortal things, but only mixing and dissolution, "but it is called φύσις among men." So in fragment 110, when he says the φύσις, or vital force of men lies in the ἦθος, we will be disposed to connect this ἦθος in some way with "mixing and dissolution." The force does not lie *primarily* in the mixture but in the elements. Wherefore his protest against the use of the term.

The ἦθος or character of a mixture would consist in its form. Now turn to fragment 125: "Changing their forms (εἴδεα), he made dead

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from living"; and fragment 137: "The foolish father, praying, takes his own son in changed form (μορφή) and slays him." I do not mean to infer that εἶδεα and ἦθος are synonymous terms for Empedocles, but that they represent different phases of the same general idea. We note here that in fragment 20 of the parts (γνῖα) of men are said to be made one by love and in fragment 107: "All things, fitted into order from these [*i.e.* the elements], are made solid and by these they φρονέουσι and feel pleasure and pain."

Certain parallels may be traced in other of the early Greeks. Diogenes of Apollonia, a forerunner of Hippocrates, uses φρόνησις in much the same way as Empedocles uses νόημα and Hippocrates φρόνησις — not for "intelligence," as is generally translated, though it may *include* his idea of "intelligence." In fragment 4 we find: "For men and other animals who breathe live by the air which is ψυχή and νόησις to them, as will be made plain in the following account. If the air is taken away, they die and their νόησις is left behind." Fragment 5: "It seems to me that νόησις is the so-called air. . . . Air, which is hotter than that outside in which we are, but much cooler than that near the sun, is the ψυχή of all animals. This is not alike in different animals, nor indeed in two different men. However, it does not differ greatly but according as they are more or less alike. Differentiated things can not, indeed, be exactly like one another until they become the same, but as there are many kinds of differentiation, so there are many and different kinds of animals, resembling one another neither in mode of life (δίαιτα) nor νόησις through the great number of differentiations. Nevertheless, all by the same thing live and see and hear and have their *other* νόησις from this."

Heraclitus' use of ἦθος, though literary and loose, is interesting. Fragment 119: ἦθος ἀνθρώπῳ δαίμων and fragment 78: ἦθος γὰρ ἀνθρώπειον μὲν οὐκ ἔχει γνώμας, θεῖον δὲ ἔχει.

Philolaos in fragment 13 points out the connection between νοῦς and ἐγκέφαλος. Hippocrates (*l.c.*, p. 612, 613) combats the error of those who have assigned the functions of the brain to the heart or diaphragm.

The whole line of thought and most of the terms come out all together in fragment 16 of the *second* part of Parmenides' poem:

> ὡς γὰρ ἑκάστοτ' ἔχει κρᾶσις μελέων πολυηάμπτων,
> τὼς νόος ἀνθρώποισι παρέστηκεν τὸ γὰρ αὐτὸ
> ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισιν
> καὶ παντί· τὸ γὰρ πλεόν ἐστὶ νόημα . . .

"For just as is the union of twisted(?) parts in each case, so νόος is present to men. For the φύσις of the parts in men, one and all, is the same as that which thinks. For excess(?) is νόημα."

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In this fragment the connection of φύσις and κρᾶσις is obvious, while φύσις, as "that which φρονέει," must be some power or force lying and having its source in the μέλεα, *i.e.* in this instance in their constitution or κρᾶσις. Further, the connection of νόος with the φύσις, κρᾶσις and μέλεα in this way indicates that it is intended to cover more elemental phases of psychosis than merely intelligence. Νόημα is the term we found in Empedocles. Τὸ πλέον accords with the basis in physiological change that we have been discussing.

We come now to a further development. There are three words in Empedocles which are certainly synonyms, *i.e.* φρήν (*Fr.* 3, 23[9], 114, 133, 134, 17[14], 15),[9] σπλάγχνα (*Fr.* 5), πραπίδες (*Fr.* 8), while νόος (*Fr.* 2[8], 17[21], 136) is probably equally so.

This φρήν, *etc.* is that into which sight, touch and the other senses are "highways" (*Fr.* 133) and is accordingly the place where whatever travels along these highways is "kept." Empedocles has no word for memory, but in fragment 3 is the expression, "to keep or hide in a dumb φρήν" and in fragment 17 that "learning increases the φρένας." Accordingly, to νόος is attributed "carelessness" (*Fr.* 13). Φρήν may be "surpassed" by "fraud" (*Fr.* 23[9]), opposed by "truth" (?) (*Fr.* 114) and is where one "surmises" (*Fr.* 15). By the σπλάγκνα we "divide a λόγος" (*Fr.* 5).[10] By the νόος we may "contemplate (δέρκεσθαι) love" (*Fr.* 17[21]), and try to "comprehend" (περιλαμβάνειν) (*Fr.* 2[8]). A prophet "strains" to see the future with the πραπίδες (*Fr.* 129. Fragment doubtful?) and finally God is a "sacred and unspeakable φρήν" (*Fr.* 134).

In connection with "comprehension" *cf.* Hippocrates (Kühn, I, 612), ἐς δὲ τὴν σύνεσιν ὁ ἐγκέφαλός ἐστιν ὁ διαγγέλλων "The brain is the messenger to the understanding." Στεγάσαι, "to keep," δέρκεσθαι, "to look at," "contemplate," περιλαμβάνειν, "to get possession of by seizing round," διατμήγειν, "to divide," are the terms which may be said to represent the higher modes of mentality for Empedocles.

Significantly the Hippocratic word for the whole process is σύνεσις, "a joining together." "I think," he says, "that the brain has the greatest power in men, for this is the interpreter to us of those things which come from the air when the brain is healthy. . . . The brain is the messenger to the understanding" (Kühn, I, p. 612).

We have already quoted above the list of the things which arise from the brain, *i.e.*, pleasures, glad thoughts, *etc.* In short the brain receives that from the outside world upon which it reacts with reference to its being pleasant or unpleasant, good or bad.

[9] *Cf.* Hippocrates (Kühn, I, p. 612), "The Diaphragm has obtained the name φρένες from accident, as it possesses no such quality."

[10] With MSS. and Burnet, not accepting Diels' correction.

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After the same manner, I think, we may interpret Empedocles. Beings are things put together in certain ways in virtue of which *way* they do certain actions when brought into contact with other things. Their φύσις, or source of activity, lies immediately in their character as compounds, ultimately in the character of their elements. Two elements will react to each other's nature or character; compounds will react in a compound fashion. Men are things put together in very complicated ways and react in very complicated ways to very complicated circumstances; even the nature of God consists in the form of the universe as, spherical and round, he sits "rejoicing in his circular solitude."

The eyes, ears, *etc.*, are the way of approach into man's nature which in its intricate fashion receives, passes around, separates and combines and reacts against the force (impression) of the outside intruder. Reception is one side of the process, reaction the other. We are told to "contemplate" love, and then again love is said to "accomplish" works in us. Mentality is a process accompanied by feeling toward its object, that is, by pleasure and pain. Increase of knowledge from what is accessible to the powers of man is one half of his teaching, action the other half. But (*Fr.* 135):

> "That which is lawful for all stretches continuously throughout the wide ruling air and the boundless light."

These activities do not go on haphazard; there is order in the universe so that things move regularly and certainly and we may learn thereof "as much as human cleverness can bring to light." Law shows no mercy, <χάρις>στυγέει δύστλητον Ἀνάγκην (*Fr.* 116), and even the gods are bound by the "great oath" which reminds us of Heraclitus and his "Erinyes, the handmaidens of justice," who police the heavens and keep the sun in his place. Strife acts in a time set by this mighty oath (*Fr.* 30).

Aristotle brings the charge against Empedocles' system that it is not able to give an account of error, but the avenues through which external things affect a man are "circumscribed" (*Fr.* 2) and error consists in partial knowledge with its consequent misreaction. A "wise man" is one who can see as much as ten or twenty generations (*Fr.* 129). We know by "chance" (*Fr.* 103) who is a goddess of error, while the *test* of truth or error is the good or bad results which may ensue to us. "Happy is the man who has acquired the riches of divine understanding; wretched the one who harbors an obscure opinion of the gods" (*Fr.* 132).

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CHAPTER III

PLATO

Plato's psychology was built up to support two fundamental interests: his theory of knowledge and his ethical philosophy, including in both cases the question of the immortality of the soul. Accordingly he needed a metaphysical psychology radically different from that of his predecessors, but we can gather from his criticisms of other psychological theories several points which will shed light on the philosophies that went before.

Plato undertook to deduce the soul from cosmic organization (*i.e.*, the existence of a world soul) in much the same way as his predecessors had done from φύσις, but he was troubled with how to account for judgments of truth and falsehood in terms of activity or motion. It would seem that he thought very much in these terms himself.

The tenth book of the *Laws,* undertaking to prove the existence of the gods so as to have some ultimate basis for law and right, gives a clear presentation of the relation between Plato's cosmic soul and the naturalistic philosophers' understanding of φύσις together with the derivative origin and nature of individual living beings.[11]

> *Ath.* But then again, tell me, Cleinias—for it is necessary that you be a partner to this discussion—perhaps it is possible that the one who says this thinks fire, water, earth and air are the most primitive of all things and calls these four φύσις while he looks upon the soul as a later development from these. Rather it seems that this is not a mere possibility, but that he thus actually demonstrates this to us in his argument. . . .
>
> Nearly all of them, my friends, are perhaps ignorant of what sort the soul is and of the power which it has and of other facts about it, especially its origin that it is among the most primitive things, generated before all bodies and rather than the latter originates all their changes and rearrangements. Now if this is so and the soul is older than the body, is it not necessary that what appertains to the soul be before what appertains to the body?
>
> *Cl.* It is necessary.
>
> *Ath.* Then opinion, conscious direction, reason, art, and law will antedate the hard, the soft, the heavy, and the light. Indeed the great primitive works and acts will be those of art for these are first, whereas the works pertaining to φύσις and φύσις itself—

[11] Burnet's edition, Oxford, N. D., 891B.

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although the word is incorrectly applied by them to these things—will be later and controlled by art and reason.

Cl. How is it incorrectly used?

Ath. They wish to say that φύσις is the productive cause (γένεσις) of first things, but if it is evident that the soul is primitive and arose among primitive things and not fire or air, then more truly it would be said that the soul is by φύσις. Such is true, if you prove that the soul is older than the body, but not otherwise (892A).

As the Athenian proceeds to argue (895A):

If all things were together in a state of inactivity, as the majority of such thinkers presume to say, which of the above-mentioned motions must first arise among these things? Self-movement must indeed arise, for by no means could things be altered by something else, if no change had previously arisen within themselves.

This self-moving power he calls "life" which is the sign of the presence of a "soul."

The ultimate source of activity according to his predecessors had lain in the cosmic elements, *i.e.*, "the roots of things." Motion and its source are where they are found—in things. It is found first in its simplest, not in its most complicated form. "Manners, characters, wishes, reasonings," *etc.*, Plato says, "are prior to length, breadth, *etc.*, . . . of bodies, if soul is prior to body," which would be a very good reason to Empedocles for saying that soul was not prior. These things are not actually found in nature first but last; they are the activities of *organic* beings.

In the *Theaetetus* we have a controversial discussion of the problem of knowledge. Socrates elicits first the definition, "Knowledge is nothing else than sense perception" (151E), and identifies this with the famous adage of Protagoras (152A): "Man is the measure of all things, of the things which are, that they are, and of things which are not, that they are not."

But, continues Socrates (152D), by the Graces, was not Protagoras, who was all-wise, telling riddles to the common herd like us while he told the truth in secret to his disciples.

Theaet. What account then would you give of the matter, Socrates?

Soc. I shall speak of a by no means unimportant doctrine according to which nothing exists of itself [alone]. You may not rightly denominate anything as such and so, but if you speak of anything as large, it appears also as small, and if heavy, also as light and so on, so that nothing is of any particular sort, but from transposition, change, and admixture arise all things which we incorrectly say exist for nothing at any time exists, but everything

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is always becoming. On this doctrine all the philosophers successively—except Parmenides—are in agreement: Protagoras, Heraclitus, and Empedocles . . .

Then again (156A):

Their principle, on which everything we have just mentioned depends, is that everything is motion and that there is nothing except this. Of this motion there are two kinds, both infinite in extent, one active, the other passive. From the union of these two motions and from their rubbing against one another arise a limitless progeny which is in turn two-fold, *i.e.*, the object of sensation and sensation which always breaks out and arises together with the object of sensation. . . .

But note the conclusion. The attempt was to explain that all these things were, as we said, in motion and that the movement was either rapid or slow. Whatever is slow exercises its motion on itself and against things near it and in this manner begets. [Text which follows is corrupt. Cousin conjectures[12]: et que ce qui est ainsi produit a plus de lenteur: qu'au contraire, ce qui se meut rapidement, déployant son movement sur les objets plus éloignés, produit d'une manière différent, et que ce qui est ainsi produit a plus de vitesse, car il change de place dans l'espace et son movement consiste dans la translation.] Whenever then the eye and some other thing fitting it are near together there arises whiteness and the cognate sensation which did not arise from either of these going to the other thing. Then these two moving through the intervening space—*i.e.*, the "visual image"[13] to the eyes and the whiteness to that which conjointly produces the color—then the eye is filled with the visual image (ὄψις) and becomes not an image but a seeing eye, while the object which coöperates in forming the color is filled with whiteness and becomes not whiteness but white whether wood or stone or whatever thing happens to be colored with this color. And the same follows for the other sensations as the hard, the warm, *et al.;* nothing is of itself, as we said above, but all things of all kinds arise in their intercourse with one another by motion since, as they say, it is not possible to think of the agent and patient as separate existences. The agent is nothing until it is joined with that which receives the action, nor the patient before its union with the agent. That which is an agent in contact with one thing appears as patient with another. And thus from all this argument, as I said in the first place, it results that nothing is one of itself, but is always becoming something. Being should

12 *Oeuvres de Platon*, tome 2, 1852, p. 77. *Cf.* however Burnet's text.

13 Ὄψις, for the meaning of which *cf.* 193B: "False judgment only remains in the following case: whenever, knowing both you and Theodorus and having the impression (σημεῖα) of both of you in the wax as of a signet ring and not seeing you sufficiently well on account of the distance, I endeavor to assign the impression of each to its proper visual image (ὄψις), fitting it and adjusting it to the traces [which it has previously left] in order that recognition may come about, . . . "

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be entirely disposed of, although we have been compelled already many times to use this word from custom and ignorance. It is not necessary, according to the learned, to allow either the word "something" or "of something" or "of me" or "this" or "that" or any other name which indicates permanence, but rather κατὰ φύσιν to say things come to be, act, perish, and metamorphose and, if anyone gives permanence to anything in his discourse, he is easily refuted. It is necessary to speak thus both of individuals and aggregates such as are presented in "man," "stones," or a particular animal or species.

This last definition of man as an aggregate, which κατὰ φύσιν is changing its form (157B), corresponds with what we said in connection with fragment 8 of Empedocles regarding man's φύσις as the form of the mixture.

But Socrates continues (157E):

Now let us not neglect what remains of this doctrine. For it remains to speak of dreams, diseases, and of madness especially, and what are called illusions of hearing, sight, and other mistakes of sensation for you know that in all these cases this seems to be a recognized refutation of the doctrine we have just expounded.

The defense which the champions of "appearance" would advance Socrates imagines as follows (158E):

May that which is in every respect other, Theaetetus, have in any way any power similar to that possessed by its opposite? And note that we do not ask in regard to a thing partly the same and partly different, but of that which is entirely other.

Theaet. If anything is altogether different, it is impossible that it should have any similarity to its opposite either in power or any other way.

Soc. And then it must be admitted to be different, must it not?

Theaet. So it seems to me.

Soc. If then it happens that anything becomes like or unlike either itself or something else, in so far as it is the same we say it is like and in so far as it is different we say it is unlike.

Theaet. Necessarily.

Soc. Have we not said before that there are an infinite number of agents and also of patients?

Theaet. Yes.

Soc. And that they come into connection at one time with one thing and at another time with another and in the different connections different results arise?

Theaet. Certainly.

Soc. Let us speak then in this way of you and me and other things as, for example, of Socrates well and Socrates sick.

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Theaet. In speaking of Socrates sick you mean Socrates as a whole and similarly of Socrates well, do you not?

Soc. You have understood me very well; I said exactly that.

Theaet. They are certainly unlike.

Soc. And therefore, since they are unlike, they are other.

Theaet. Necessarily.

Soc. And would you say the same Socrates sleeping and of all the other states of which we have already treated?

Theaet. I should.

Soc. Is it not true that each of the things whose nature it is to do something whenever they encounter Socrates well act differently towards me than when encountering me sick?

Theaet. How else could it be?

Soc. And I who am the patient and that which is the agent will produce a different result in each of the cases.

Theaet. Yes.

Soc. Whenever I, being in health, drink wine it appears pleasant and sweet?

Theaet. Yes.

Soc. For, as we acknowledged before, the agent and the patient produce sweetness and a sensation, both being in motion together and the sensation being carried to the patient, produces a sensing tongue and the sweetness, carried to and about the wine makes the wine both to be and to appear sweet to the healthy tongue.

Theaet. It has already been acknowledged by us to be thus.

Soc. But when I am sick, does it not in truth act upon another and not the same person, for it affects one who is different?

Theaet. Yes.

Soc. For Socrates in such a condition [sick] in combination with the drink of wine produces a different result, *i.e.* a sensation of bitterness arises in and is carried about the tongue and bitterness arises in the wine and this latter becomes not bitterness but bitter and I not a sensation but a sensing [man].

Theaet. Certainly.

Soc. Having sensation in this way I shall not become something different, for another sensation would be of another thing and another thing would make the one sensing different. Nor can that which produces this effect in me, encountering another person, produce the same effect in him for the different factors will produce a different result and the agent become different.

Theaet. That is true.

Soc. I am not then of myself in a certain state, nor is that which affects me of itself in a certain state.

Theaet. Indeed not.

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Soc. It is necessary that I have a sensation of something whenever I am sensing, for it is impossible that there be a sensing which is a sensing of nothing. For this something must be present to the person whenever sweet or bitter or any such arise. For it is impossible that anything should be sweet which is sweet to no one.

Theaet. Entirely true.

Soc. It follows then, I think, for us that with respect to being and becoming we both are and become one thing with reference to another, since our being is necessarily relative but not relative to any other [*i.e.* a third thing] nor to us ourselves. It results that there is a mutual relation. Thus whoever says anything is or becomes something, he says it is or becomes *to, of* or *with reference* to something; he must neither say nor permit any one else to say that it either is or becomes anything of itself. This the argument which we have been expounding indicates.

Theaet. Altogether true, Socrates.

Soc. Then is it not true what acts upon me is relative to me and not to another and that I have a sensation of this [object] and not another person?

Theaet. How could it be otherwise?

Soc. Then my sensation is true to me—for it is always of my being—and I am judge, according to Protagoras, of the things which are [relative] to me, that they are, and of the things which are not, that they are not.

Theaet. So it seems.

Perception is a relation entered into between perceiver and perceived, a form of motion. The eyes and ears are the "highroads," to use Empedocles' term, over which this motion travels. Socrates bitterly tastes the embittered wine, while bitterness is the attribute of the sensation as an operation. Accordingly "when I am sick, [the wine] in truth acts upon another and not the same person, for it affects one who is different," or, as Empedocles says (*Fr.* 108), "in so far as men grow to be different, so far it is their power to φρονεῖν other things."

Plato has here cleverly laid the foundation on which to build his objections, *i.e.* the emphasis on the individuality and discreteness of perceptions. From this he thinks he can show the impossibility of judgments as to truth and error and its consequent ethical implications. We need some criterion and a soul to hold it, some "measure of things." We are not, however, here interested in the remaining details of Plato's argument as to how true and false opinion may be a false or correct identification between the memory image in the "block of wax" and a present perception.

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CHAPTER IV

ARISTOTLE AND THEOPHRASTUS

I

"The ἔμψυχον seems to differ from the ἄψυχον chiefly in two ways, *i.e.* motion and perception. These are approximately the two characteristics of the soul which we have received from our predecessors" (*De anima*, 403 b 25). Under these two headings Aristotle accordingly makes his attack on these predecessors.

How can the soul be the self-mover, he asks? In which of the four ways could the soul move, *i.e.* locomotion, qualitative change, diminution or augmentation? For it would have to have a place of rest and be of such a nature as to be moved under constraint, "but what kind of forced motion and states of rest there can be of the soul, it is not easy to say even for one wishing to draw on his fancy" (406 a 25).

Not the least of his objections is that "they attach the soul to and place it in the body without demonstrating through what cause this comes about and how the body is in this relation. But this would seem to be necessary. For it is through their community [*i.e.* that of the soul and body] that the one acts while the other is acted upon, the one is moved while the other moves. Now nothing of the sort takes place between any two bodies which happen to come together. They only attempt to give an account of what sort the soul is, but they have nothing to say of the body which contains it just as in the Pythagorean myth any soul could happen to enter any body. But each [body] seems to have its own peculiar form and shape. This is just as if they talked of the transference of the craft of carpentry into a flute. For the craft must use its tools and the soul [in the same way] the body" (407 b 15).

This is the natural and inevitable attack on the Platonic position as we have set it forth in Plato's arguments against the naturalists, but entirely irrelevant to the latter. The answer crudely put is that the soul is, in so far as it has the attributes of motion, and that the body is its seat of manifestation. If Aristotle in any way refers this to Empedocles (as perhaps he might have in relation to the blood as νόημα) he is confusing a Platonic soul with a discussion of the way activity is transmitted throughout the body. The naturalists began in the way and place that Aristotle indicates as lacking.

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Those who consider the soul primarily as *knowing* and *perceiving*,[14] Aristotle continues, identify it with their first principles, "for they not unreasonably assume the soul to be that amongst first principles or primary elements which is by its nature capable of causing motion" (Hicks' rendering, p. 226). This theory, Aristotle says, is based on the assumption that like is known by like. How then, he asks, can the soul know quantity and qualities, *etc.*, unless it is composed of these two and how would it know complex things such as God or flesh unless it has their compounds? At the end of all these objections, he throws in inadvertently, "but they assume that perceiving is a sort of being affected (πάσχειν) and being moved and so also thinking and knowing" (410 a 25).

Aristotle makes one other point in connection with what he calls the definition of the soul as a *harmony*. We might ask Empedocles, he argues, "inasmuch as he says that each of these [parts] is in a certain proportion (λόγος), whether the soul is a λόγος or does it rather arise in the parts of the body as a separate being?"

We gather, then, from Aristotle that Empedocles understood the process of αἰσθάνεσθαι to be affection and movement of a complex, definite, organic body. Aristotle's argument is that you can not get things into a soul which is some place or thing, while he gives in his account a position entirely irrelevant to this argument, *i.e.*, that perceiving is the relation of a complex organism to an object by way of the relation that holds between similars.

II

The fragment of Theophrastus, *De Sensu et Sensibilibus*, has been the chief source on Empedocles' psychology for modern historians of philosophy. It is without qualification the worst! Theophrastus has taken two minor features—the question of likes or opposites affecting each other and the problem of "pores"—and from these he has written out a psychology.

"There are many opinions with respect to sensation all of which can be reduced under two heads: some think it to be accomplished by like perceiving like, others by contraries. Parmenides, Empedocles and Plato by like, the followers of Anaxagoras and Heraclitus by contraries.

"The former argue that different things are compared by their likenesses and that it is innate in animals to recognize those of their own kind. Sensation is by an effluence in which case like is carried to like.

"The others understand sensation to be by qualitative change. Anything is not affected [changed] by that which it resembles but the

[14] *Cf.* Zeller, *Presoc.* Vol. II, p. 167.

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opposite, being affected by this, produces thought. They think that evidence is given in the fact that in the case of touch anything which is of the same temperature as the flesh is not felt" (Wimmer, p. 321).

After this general introduction Theophrastus takes up each of the men separately.[15] "Empedocles speaks in the same way of all the senses, and says that perception is due to the 'effluences' fitting into the passages of each sense. And that is why one can not judge the objects of another; for the passages of some of them are too wide and those of others too narrow for the sensible object, so that the latter either goes through without touching or can not enter at all." In other words an atom of water running across another of its kin gets a friendly recognition or has a bright idea.

Sight and smell he explains in detail, but sound is by a process altogether different from effluences and pores; taste and touch, he says, Empedocles failed to explain, although these would have been the easiest.

Then comes a long attack, beginning with the objection that one can not, under this conception, differentiate the ἔμψυχα from other things with respect to sensation; then that thought and perception can not be differentiated; and finally raising some dialectical objections with respect to filled or empty pores and the denial of a vacuum.

We have little or nothing to learn from Theophrastus, but it is interesting to note how he could pick out a minor point from the tradition, couple it with a description of the eye and work it up into a discussion which, as we see, is far removed from even the Aristotelian account.

[15] *Cf.* Burnet, *Early Greek Philos.*, p. 284, from whose translation the following is quoted.

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CHAPTER V

THE DOXOGRAPHERS [16]

During Hellenistic and Roman times there was compiled a number of histories or collections of the opinions of previous philosophers. The three most important remnants which have come down to us are Diogenes Laertius' *Lives and opinions of the philosophers,* the *Eclogae physicae* of John Stobaios and the pseudo-Plutarchian *Placita philosophorum.* The latter is by far the most valuable.

None of these authors had access to any original sources. Their relations to each other and to traditional predecessors has accordingly been a matter for extensive research. Diels (*Doxographi graeci*) traces them all ultimately back to the *Eighteen books of physical opinions* of Theophrastus of which the fragment, *De sensu,* treated above, is practically all that remains to us.

This controversy does not in general concern us here, but in discussing them as sources of our knowledge of early Greek philosophy I have thought it worth while to show at some length that these *placita,* as they have come down to us, are written from the point of view of the late Hellenistic philosophies. They have taken the topics of interest to controversialists of the *late* Stoic, Skeptic, Epicurean, and Peripatetic schools and shown what, with reference to their point of view, the earlier philosophers had to say. Those we have remaining are particularly Stoic. If this can be shown, we can properly understand at least the kind of difficulties that lie in the way of properly interpreting the collections. Whether much is to be learned of the early Greek philosophy from these later interpretations may be doubtful, but at least we can determine on what basis the doxographers chose their material or left out that which was at hand.

Further, I think that it will be apparent that this tradition did not come from Theophrastus, as Diels suggests, for it neither contains the same material as the fragment *De sensu* nor is it written from the same point of view.

A mere superficial reading will show the great preponderance given to the late Stoic and to a less extent Epicurean doctrines themselves, as, *e.g.,* the lengthy accounts in Diogenes Laertius. The important part played by Plato's *Timaeus* is also apparent and will be shown more in detail.

[16] Note especially the "Prolegomena" to Diels' *Doxographi Graeci.*

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I

The first and most striking evidence of the field of discussion in which these histories of philosophy were set out is to be found in a comparison of the tables of contents of Aetius' *Placita,* as found particularly in the pseudo-Plutarchian *Epitome* (*Placita philosophorum*), with those of Lucretius' *De rerum natura,* Sextus Empiricus' *Pyrrhoniorum hypotyposeon,* Book III, and *Adversus Mathematicos,* Book VIII, Chryssippus' *Placita,* and the detailed outline of Stoic doctrine in Diogenes Laertius, Book VII, and less clearly on Epicurus in Book X. The arrangement is analogous to that into which the Epicurean fragments fall as given by Usener, *Epicurea,* p. 169 *sq.,* and those of Zeno and Cleanthes in Arnim, Vol. I.

We have the three divisions of philosophy: *Logica* (*Canonica*), *Physica,* and *Ethica,* though only one or two of these divisions may be represented in any particular case. Plutarch gives this triple division in his introduction. The tables of contents are too long to be given here at length but we may in general note the following correspondences. Arnim (p. 110 *sq.*) arranges the physical section of Cleanthes' *Placita* as follows:

B. *Physica et Theologica*

1. *Physica fundamenta*
2. *De Mundo et meteoris*
3. *De animalibus*
4. *De anima hominis*
5. *De fato*
6. *De natura deorum*
7. *De providentia et divinatione*

The pseudo-Plutarchian *Epitome* shows signs of bad mixing and *lacunae* (*e.g.,* Book IV: "Having taken a survey of the general parts of the world, I will take a view of the particular members of it." He then in the first section discusses the overflowing of the Nile and in subsequent chapters the soul and related subjects), but as the sections come to us we have the *physicae fundamenta, de fato,* and *de natura deorum* grouped together in the first section; Books II and III are *de mundo et meteoris; de animalibus* is represented in a jumbled condition in Book V and more satisfactorily in the *Eclogae* of Stobaeus, chapters 42–7; finally *de anima hominis* occupies Book IV with the exception of the first chapter which is on the River Nile. The first and fourth books are the ones of chief importance for our purposes.

The first book corresponds most nearly to the divisions into which Diogenes Laertius says the Stoics classify Natural Philosophy, "accord-

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ing to species": *περὶ σωμάτων τόπον, καὶ περὶ ἀρχῶν, καὶ στοιχείων καὶ θεῶν, καὶ τερὰτων καὶ τόπου, καὶ κενοῦ* (VII, 132), and it corresponds much more minutely to the actual contents. The fourth and fifth books of Plutarch are to be compared with the third part of the Stoic division "according to genera," *i.e.*, *ὁ αἰτιολογικός*, in which Diogenes Laertius says they inquire: *περί τε τοῦ ἡγεμονικοῦ τῆς ψυχῆς καὶ περὶ τῶν ἐν ψυχῇ γινομένων, καὶ περὶ σπερμάτων καὶ τῶν τούτοις ὁμοίων.*

Now more minutely. The general introduction to the pseudo-Plutarchian *Epitome*, which in our text is the introduction to the first book, starts out by quoting the Stoics on the divisions of philosophy, *i.e.*, natural, moral, and logical. The *Epitome* is to be on the natural, *i.e.*, *περὶ κόσμου καὶ τῶν ἐν κόσμῳ.*

This use of natural philosophy is entirely un-Aristotelian. At the end of the introduction he gives what purports to be the Aristotelian division, *i.e.*, theoretical and practical. He might possibly have gotten such a division out of Aristotle (*cf. Metaph.* A. I, 993 b 20), though it is not the regular triple division of *πρακτική, ποιητική*, and *θεωρητική*. What is more, it is entirely irrelevant to Plutarch's work. Apparently this was a *later* Peripatetic division, as, *e.g.*, in Strato, who seems to have discussed "physics" and "ethics," including under the first the topics which we here find in Plutarch: *primum Theophrasti Strato physicum se voluit, in quo etsi est magnus, tamen nova pleraque et perpauca de moribus* (Cicero, *Fin.* V, 5, 13).[17]

The introduction of the pseudo-Plutarch should be compared with Diogenes Laertius' introduction which also takes for granted the Stoic division: *Μέρη δὲ φιλοσοφίας τρία, φυσικὸν, ἠθικὸν, διαλεκτικόν. φυσικὸν μὲν τὸ περὶ κόσμου, καὶ τῶν ἐν αὐτῷ. ἠθικὸν δὲ, τὸ περὶ βίου καὶ τῶν πρὸς ἡμᾶς. διαλεκτικὸν δὲ, τὸ ἀμφοτέρων τοὺς λόγους πρεσβεῦον* (I, 18).

The first chapter of the *Epitome* on "What is *φύσις*" is most unintelligibly confused. He quotes Aristotle to the effect that "*φύσις* is the principle of motion and rest in a thing in which it exists principally and not by accident," a definition which corresponds roughly with Phys. II, 1, 192 b 14 (Cf. *Metaph.* Δ, IV). "For all things," Plutarch continues, "which are seen, as many as are neither by chance nor necessity nor are divine nor have any such cause are called *φυσικά* and have their own proper *φύσις*, *e.g.* earth, fire, water, air, plants, animals and those things which arise as rain, hail, thunderbolts, lightning, winds. All these have some *ἀρχή* and were not from eternity but arise from some *ἀρχή*. So indeed animals and plants have a beginning of generation. *Φύσις* is in these primarily the *ἀρχή* not only of motion but

[17] *Cf.* Zeller, who quotes Cicero, (*Aristotle*, Vol. II, p. 454).

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also of rest. For whatever receives a beginning of motion this also can receive an end."

This section gives us in a garbled way the latter field of discussion over φύσις with an Aristotelian flavor, such a discussion as one would expect to find in Strato, and so Cicero gives it: *nec audiendus eius [Theophrasti] auditor Strato, is qui 'physicus' appellatur, qui omnem vim divinam in natura sitam esse censet, quae causas gignendi augendi minuendi habeat, sed careat omni sensu et figura* (*De deor. nat.* I 35).

For Epicurus we have Plutarch, *adv. Coloten* (Usener, 74), ἐν ἀρχῇ δὲ τῆς πραγματείας ὑπειπὼν τὴν τῶν ὄντων φύσιν σώματα εἶναι καὶ κενόν ὡς μιᾶς οὔσης εἰς δύο πεπόιηται τὴν διαίρεσιν, . . .[18]

The Stoics called the four elements *naturae.* (Cicero, *de deor.* nat., II, 32, 84).

The second chapter is entitled, τίνι διαφέρει ἀρχὴ καὶ στοιχεῖα. It starts with the assertion that Plato and Aristotle so differentiated. This might well hold for Plato's *Timaeus* (Tim. 53 C-D., *Cf. Phaedr.* 246 C), but certainly does not for Aristotle who considered the elements as a kind of ἀρχαὶ (*Metaph.* 5 Δ 1. 1013 a 2D). Diogenes Laertius, however, at the beginning of his account of Stoic natural philosophy (VII, 134) writes, διαφέρειν δέ φασιν [*i.e. the* Stoics] ἀρχὰς καὶ στοιχεῖα. τὰς μὲν γὰρ εἶναι ἀγενήτους <καὶ> ἀφθάρτους, τὰ δὲ στοιχεῖα κατὰ τὴν ἐκπύρωσιν φθείρεσθαι.

At the end of the section Plutarch says, "For there are some things prior to earth and water from which these come, *i.e.* ἡ ὕλη ἄμορφός οὖσα καὶ ἀειδὴς καὶ τὸ εἶδος, ὃ καλοῦμεν ἐντελέχειαν καὶ ἡ στέρησις. These are Aristotelian terms all right, though Aristotle never so gives a list of ἀρχαί. We find in Diogenes Laertius on the Stoics (VII, 139; Arnim, 300), δοκεῖ δ' οὐτοῖς ἀρχὰς εἶναι τῶν ὅλων δύο, τὸ ποιοῦν καὶ τὸ πάσχον. τὸ μὲν οὖν πάσχον εἶναι τὴν ἄποιον οὐσίαν, τὴν ὕλην· τὸ δὲ ποιοῦν τὸν ἐν αὐτῇ λόγον, τὸν θεόν and Seneca, *dicunt, ut scis, Stoici nostri: duo esse in rerum natura, ex quibus omnia fiant, causam et materiam, materia iacet iners, res ad omnia parata, cessatura, si nemo moveat, causa autem, id est ratio, materiam format . . .* (*Ep.* 65, 2—Arnim, 303).

The fourth chapter of Plutarch is an original rather than historical discussion of how the κόσμος arose. It is a typically late discussion and parallels Lucretius (V, 416 *sq.*), detail for detail.

The gist of Chapter VI on "Whence men derive their knowledge of the Gods," is that it is first from nature, secondly from myths and thirdly from the laws. This is the famous Stoic[19] argument from nature and common consent. *Nec ulla gens,* says Seneca (*Ep.* 117[6]),

[18] Note also quotation from Sextus Emp. on Epicurus (Usener, 76).

[19] *Cf.* Arnold, (*Roman Stoicism,* p. 223 *sq.*), who gives quotations.

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usquam est a deo extra leges moresque projecta, ut non aliquos deos credat; and Cicero *deor. nat.* II 6, 17: *tantum vero ornatum mundi, tantum variatatem pulchritudinemque rerum caelestium . . . si non deorum immortalium domicilium putes, nonne plane desipere videare?*

II

Plato's *Timaeus* was the work which attracted the notice of the schools which followed him and its doctrines come down to us through all subsequent tradition. Aristotle bases his criticism of Plato in the *De Anima* on this dialogue and it was, significantly enough, the only one of Plato's works preserved to the medieval schools.

Its peculiar doctrines have been the cause of many attempts to reconcile them with the rest of the Platonic canon, even to the extent of the dialogue being considered spurious.[20]

It is therefore interesting for us to note that the *Placita* of Aetius is practically dependent on this dialogue, or some source familiar with it, for its account of Plato's philosophy. We give here the parallels in the first part of the *Placita* and will speak of Book IV below:

Placita, Book I

Chapter 2.....*Timaeus,* 53C-D. *Cf. Phaedrus,* 246C
Chapter 3.....*Timaeus,* 28–9, 51 sq. *Cf. Cratylus,* 389–90
Chapter 5.....*Timaeus,* 31. *Cf.* 32D and 33
Chapter 7.....*Timaeus,* 52
Chapter 9.....*Timaeus,* 52C, 50; 49A; 50D. *Cf.* Arist. *Phys.* 4Δ3, 209b10
Chapter 10.....*Timaeus,* 29
Chapter 11.....From the general position of the *Timaeus. Cf. Philebus,* 28, 30
Chapter 12.....*Timaeus,* 63D-E, 49; 52. *Cf.* Arist. *Phys.* 4Δ2, 209b10
Chapter 17.....*Timaeus,* 56
Chapter 19.....*Timaeus,* 49 sq. *Cf.* Arist. *Phys.* 4Δ2, 209b10
Chapter 21.....*Timaeus,* 37D
Chapter 22.....*Timaeus,* 38B, 37D (direct quotation)
Chapter 25.....*Timaeus,* 47E. *Cf. Laws,* 904
Chapter 26.....*Timaeus,* 47 sq.
Chapter 27.....*Timaeus,* 47. *Cf. Laws,* 904 (N.B.)
Chapter 29.....*Laws,* 889

[20] *Cf.* Ladevi-Roche, *Le vrai et le faux Platon ou le Timée démonstré apocryphe,* Paris, 1867.

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Book II

Chapter 4.....*Timaeus,* 33 (Contra *Laws,* X)
Chapter 5.....*Timaeus,* 33C
Chapter 6.....*Timaeus,* 31–2, 34, 52D; 53C, 55 sq.
Chapter 7.....*Timaeus*
Chapter 9.....*Timaeus,* 80C
Chapter 10.....*Timaeus, 62*

Book I, Chapter 8, "On daemons and heroes," is not from the *Timaeus* nor relevant to it (perhaps *Republic,* 427B or *Laws,* 717B).

III

These are the chief general discussions of the first book and sufficient to show the kind of topical arrangement we have been discussing. We now turn to the fourth book which more immediately concerns us. Here we find the Stoic epistemological position with an Epicurean mechanism of sense perception, together with some peculiar statements attributed to Plato.

In Hellenic philosophy the soul and its activities, sensation, *etc.,* are discussed under two separate branches. The soul in general comes under physics as a part of zoölogy, so to speak, while most of the discussion of sensation and knowing is included in dialectics. This is significant inasmuch as it marks the epistemological interest.

Now Plutarch has the conventional divisions: on the soul, its parts, sensation in general, and the special senses. In addition he gives two chapters which come from the dialectical division, one on: *εἰ ἀληθεῖς αἱ αἰσθήσεις καὶ φαντασίαι*; the other *τίνι διαφέρει φαντασία φανταστὸν φανταστικὸν φάντασμα.* This should be compared with Diogenes Laertius on the Stoics (VII, 49 *sq.*): "The Stoics choose first to give an account of *φαντασία* and *αἴσθησις* as this is the criterion by which they know the truth of things." This discussion found an important place in Crysippus' *Placita* (Arnim, Vol. II, p. 21 *sq.*) prior to the discussion of sensation and gives the epistemological setting to the whole.

Of the five sections on sensation or the senses in general two are entirely given over to the Stoics (11 and 21) and the rest begin with their doctrines (8, 9 and 10). Chapter fifteen on the visibility of darkness is also occupied with Stoical doctrines. The other philosophers mentioned in these general sections are Empedocles, Leucippus, Democritus, Plato, and Heraclides. In the case of the special senses the Stoics are not mentioned, but we find here Alcmaeon, Empedocles, Democritus and Leucippus, and Plato.

The Platonic definition of the soul in the passage is from *Timaeus,*

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34C *sq.*[21] The definition of sensation attributed to Plato, ψυχῆς καὶ σώματος κοινωνίαν πρὸς τὰ ἐκτός, might have come from the *Timaeus* or elsewhere. The argument for the immortality of the soul that "when it departs, it goes to the soul of the universe which is of the same nature" might have been derived from the *Timaeus* (*Cf.* 90 *sq.*); it certainly is not in harmony with the teaching given in the *Phaedo* and elsewhere.

In this setting the only pre-Socratic philosophers who get noticed to any extent with respect to the soul and its activities are Empedocles and Alcmaeon.[22] Plutarch asks certain questions and gives the following answers for Empedocles:

Where is the soul situated?

It arises in the blood.

Are sensations and imaginations true?

Sensations arise in every case through a symmetry of the pores, that which is peculiar to a particular sense being adapted to it.

Concerning sight.

The rays (of the eyes) (ἀκτίς) are mingled with the images (εἴδωλα), and the resultant is called ἀκτιν–είδωλον.

Concerning hearing.

Hearing is caused by the striking of the air on the cartilage which hangs on the inside of the ear like a bell and is struck upon.

Concerning smell.

The scents are introduced into the inhalations of the lungs, for whenever breathing is difficult one can not smell readily as in the case of a cold in the head.

It must be obvious that we have little to learn from this account, for the reason that Empedocles had nothing to say on the Stoic problem. The thing to be guarded against, however, is not the slight accounts of the mechanism of perception, but the taking of this exposition as a representation of the naturalistic position with respect to man and his activities. Writing from Plutarch's point of view nothing of importance could be said of this early Greek philosophy.

21 *Cf.* note by Hicks, *Tim.* p. 106.

22 Stobaeus has some additional opinions, especially those attributed to the Peripatetics.

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It remains also to be pointed out that at least this part of the *Placita* has no relation to Theophrastus' *De sensu*. In his work Theophrastus presents a very striking doctrine which is not here represented. We hear nothing of likes and opposites. Even in detail the accounts are not similar as is especially marked in the explanation of sight which is quite different in the two works.[23]

[23] Theophrastus, *De sensu* (Burnet, *Early Greek Philos.*, 1892, p. 264) and Plutarch, Book IV, 13.

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CHAPTER VI

SUMMARY

The main points which we have attempted to establish are briefly:

I. Starting from the position that Empedocles based his cosmic philosophy on a universe of ultimate elements, one of whose immanent properties—the attraction of like for like—was a source of motion and development, we cited the terminology of the fragments to establish the thesis that the development and activities of man were ultimately motivated by this universal principle in the elements, but immediately controlled and directed by the specific form or arrangement of the human organism. The elements, put together in certain forms or organisms, react in certain definite ways when the organism is brought into relation to other things. Life is an activity latent in the elements and in the complex structure of man; perception and thought are specific activities induced in the organism by contact with its environment through the senses. The sense organs are the routes through which contact is maintained between the human organism and the outside world.

II. The first assumption that the ultimate source of activity lies in the roots of things is corroborated by Plato, as is the conception of man as an aggregate of a certain form, which form determines his life and reactions. Perception is a form of motion, of activity, entered into by perceiver and perceived, determined by the form or condition of both. The relativity of knowledge involved is, for Plato, not to be entertained—whence Plato's argument for the soul as the primal source of motion.

III. From Aristotle's inadvertencies we also learn that perception for Empedocles was an affection and movement of an organic body, resting ultimately on a principle of motion inherent in the first elements. Aristotle is burdened, however, with the word "soul" in his discussion of the early philosophy, inconsistently attacking a Platonic meaning of soul.

IV. From Aristotle's successors we learn nothing about Empedocles. The Doxographers wrote with reference to what the earlier philosophers had to say, pro and con, of certain problems which occupied Hellenistic philosophy. Philosophical terms and the Greek language in general had acquired new meanings by this time. It is as though we should

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quote Aristotle on "matter" and "energy" as defined in a twentieth century text-book of physics, considering his terms ὕλη and ἐνέργεια to have a twentieth century meaning. Most of the doxographical background is Stoic. Their Platonic philosophy was derived from the *Timaeus*. Whence they obtained their material on Empedocles is not evident, but it was apparently not from Theophrastus.

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VITA

Natus sum Walter Broad Veazie in oppido Topeka in pago Kansas die III m. Nov. A.D. MDCCCXCII. Anno MCMIX in matriculam Universitatis Utahiensis relatus sum. Duo post annis in Collegium Columbiae Novi Eboraci me contuli ubi anno MCMXIV ad gradum Baccalaurei in Artibus admissus sum. Tunc Universitatis Columbiae socius peregrinans ascriptus nomen meum in numerum civium academicorum Universitatis Oxoniensis retuli. Uno anno postquam ad Universitatem Columbiae redieram. Ibi studiis philosophicis operam dedi. Docuerunt me philosophorum ordinis inter alios viri clarissimi Frederick J. E. Woodbridge, John Dewey, Wendell T. Bush, Edward Delevan Perry. Maximopere autem de me meritum est seminarium philosophicum Decani Woodbridge; gratias atque ei ago maximas.

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